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| APPLICATION NO.                                                                                              | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 09/240,265                                                                                                   | 01/29/1999  | MARK E. PETERS       | CR9-98-095          | 7166             |
| 25259                                                                                                        | 7590        | 06/27/2005           | EXAMINER            |                  |
| IBM CORPORATION<br>3039 COWNALLIS RD.<br>DEPT. T81 / B503, PO BOX 12195<br>REASEARCH TRIANGLE PARK, NC 27709 |             |                      | CALLAHAN, PAUL E    |                  |
|                                                                                                              |             |                      | ART UNIT            | PAPER NUMBER     |
|                                                                                                              |             |                      | 2137                |                  |

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/240,265             | PETERS, MARK E.     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Paul Callahan          | 2137                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 December 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 11 March 2002 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                         |                                                                             |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date: _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|                                                                                                                         | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

1. Claims 1-12 are pending in this application and have been examined.

### ***Response to Arguments***

2. In view of the arguments presented in the Appeal Brief filed on 12-20-2004, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shambroom (5923756) and Schneier Applied Cryptography, in view of Balenson, "Privacy Enhancement for Internet Electronic Mail: Part III: Algorithms, Modes, and Identifiers", Network Working Group, Request For Comments (RFC) 1423, February 1993.

As for claim 1, in lines 32-35 of column 10, Shambroom discusses a certificate that includes a public key and list of one or more cryptographic algorithms supported by the entity associated with the public key. The certificate can resemble an X.509 certificate. On pages 574 and 575, Schneier describes the X.509 certificate. As can be seen in figure 24.2, the certificate includes a section that identifies the algorithm, parameters, and a public key. There is also a section for a signature. These read on the first clause of applicant's first claim. The list of algorithms disclosed in Shambroom also anticipates an extension for identifying at least one alternative algorithm. Shambroom does not dictate that a second public key and signature therefore be included in the certificate or used as an alternative means of protecting data included within the certificate. However Balenson does explicitly teach this feature in Section 4.3, Asymmetric Signature Algorithms. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to configure an X.509 certificate to utilize alternative signatures formed with different algorithms on data contained within the certificate as taught by Balenson, in the exemplary X.509 certificate of Shambroom and Schneier, thereby protecting the data from

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compromise. It would have been desirable to do so since utilization of alternative algorithms would increase the difficulty in unauthorized access to the protected data within the certificate. Motive to make this combination is found for example, at page 574 where Schneier discusses the advantages of X.509 certificates capable of utilizing different algorithms such that authentication across networks is made possible.

As for claim 2, pages 480 and 481 of Schneier discuss elliptic curve public key systems. RSA is first mentioned on page 17. According to Schneier, it is the most popular public-key algorithm. There are trade-offs between the two, particularly in terms of the relative computational workloads of the two entities (signer and verifier). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to support RSA and an elliptic curve cryptosystem with the X.509 certificate taught by Shambroom.

As for claim 3, both of the signatures taught by the combination of Shambroom, Schneier and Balenson verify at least part of the certificate and hence read on claim 3.

Claims 4-6, 7-9, and 10-12 are largely the same as claims 1-3 and are rejected on the same grounds.

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***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul E. Callahan whose telephone number is (571) 272-3869. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Andrew Caldwell, can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is: (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

6-8-05

*Paul Callahan*

*E. Moise*  
EMMANUEL L. MOISE  
SUPERVISORY PATENT EXAMINER